MICHAEL C. BURGESS, M.D.
26TH DISTRICT, TEXAS

WASHINGTON OFFICE:
1721 LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-7772

DISTRICT OFFICES:
1660 SOUTH STEMMONS FREEWAY
SUITE 230
LEWISVILLE, TX 75067
(972) 434-9700

1100 CIRCLE DRIVE
SUITE 200
FORT WORTH, TX 76119
(817) 531-8454

www.house.gov/burgess

Congress of the United States
House of Representatives
Washington, DC 20515-4326

COMMITTEE:
ENERGY AND COMMERCE
SUBCOMMITTEES:
HEALTH
ENERGY AND AIR QUALITY
OVERSIGHT AND INVESTIGATIONS

HOUSE REPUBLICAN
POLICY COMMITTEE

CHAIRMAN:
MEDICARE AND MEDICAID
SUBCOMMITTEE

Medical Focus - Avian Flu Essentials

November 28, 2005

"America is nothing if it consists of each of us. It is something only if it consists of all of us." – Woodrow Wilson

Dear Colleague:

In the fifth letter in the Avian Flu Essentials series, I will discuss broad trends in the evolution of viruses.

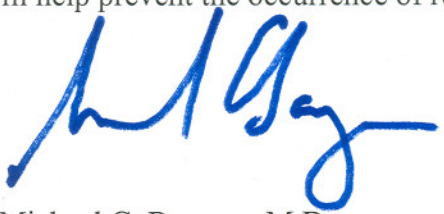
Genetic drift and genetic shift are the two main ways to categorize changes in the virus' genome. During genetic drift, the virus acquires minor changes or mutations. A virus continually evolves so this entails the need to produce new flu vaccines every year. In addition, this signifies that an individual is never completely immune to an influenza virus because that person will repeatedly come in contact with modified viral strains throughout his lifetime.

On the other hand, a genetic shift is associated with different antigens. Antigens are found on the viral protein coat. These include H and N, as discussed in a previous letter. Therefore, with a genetic shift, different proteins are present and humans may have no prior exposure to that particular virus strain. This can lead to the development of a pandemic.

In addition, a reassortment event can take place when viruses from different species mix and a new viral strain is formed. For example, some genes from an avian flu virus and a human virus could combine if a host was infected with both. It is hard to predict the particular characteristics that such a virus would have but it could have a high infection rate.

Therefore, it is important to encourage your constituents to get their regular flu shot, especially for high priority groups that have been designated by the Center for Disease Control. An influenza vaccine is recommended for the elderly with comorbid conditions, residents of long term care facilities, young children, pregnant women, and health care workers. Illnesses from the seasonal influenza can be reduced and regular flu vaccines will help prevent the occurrence of reassortment.

Sincerely,



Congressman Michael C. Burgess, M.D.
Member of Congress